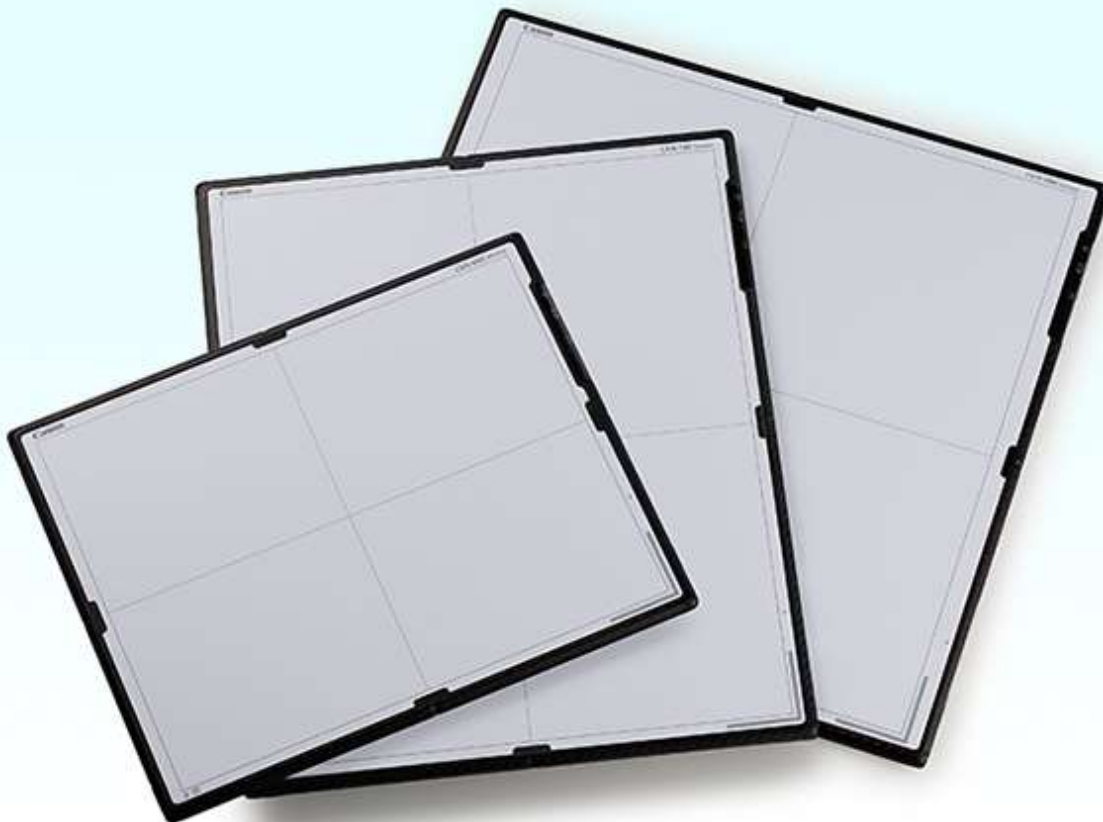


Exhibit A

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CANON TECHNOLOGY



Digital Radiography Systems

Digital radiography systems support X-ray diagnosis in various clinical settings. Canon's digital radiography systems incorporate proprietary X-ray image sensor technology and are designed to offer superlative portability and operability.

2018/12/27 Featured Technology

X-Ray Image Sensor

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In 1998, Canon launched its CXDI series of digital radiography systems incorporating LANMIT (Large Area New MIS Sensor and TFT) proprietary X-ray image sensor technology. Since then, the company has responded to the diverse needs of X-ray diagnosis by continuously expanding its product lineup as a leader in the field.

LANMIT sensor units utilize a photosensor with a five-layered construction that includes a scintillator layer and amorphous silicon. The scintillator utilizes cesium iodide (CsI), which has a high light-conversion efficiency, thereby reducing radiation exposure and achieving higher-resolution imaging.

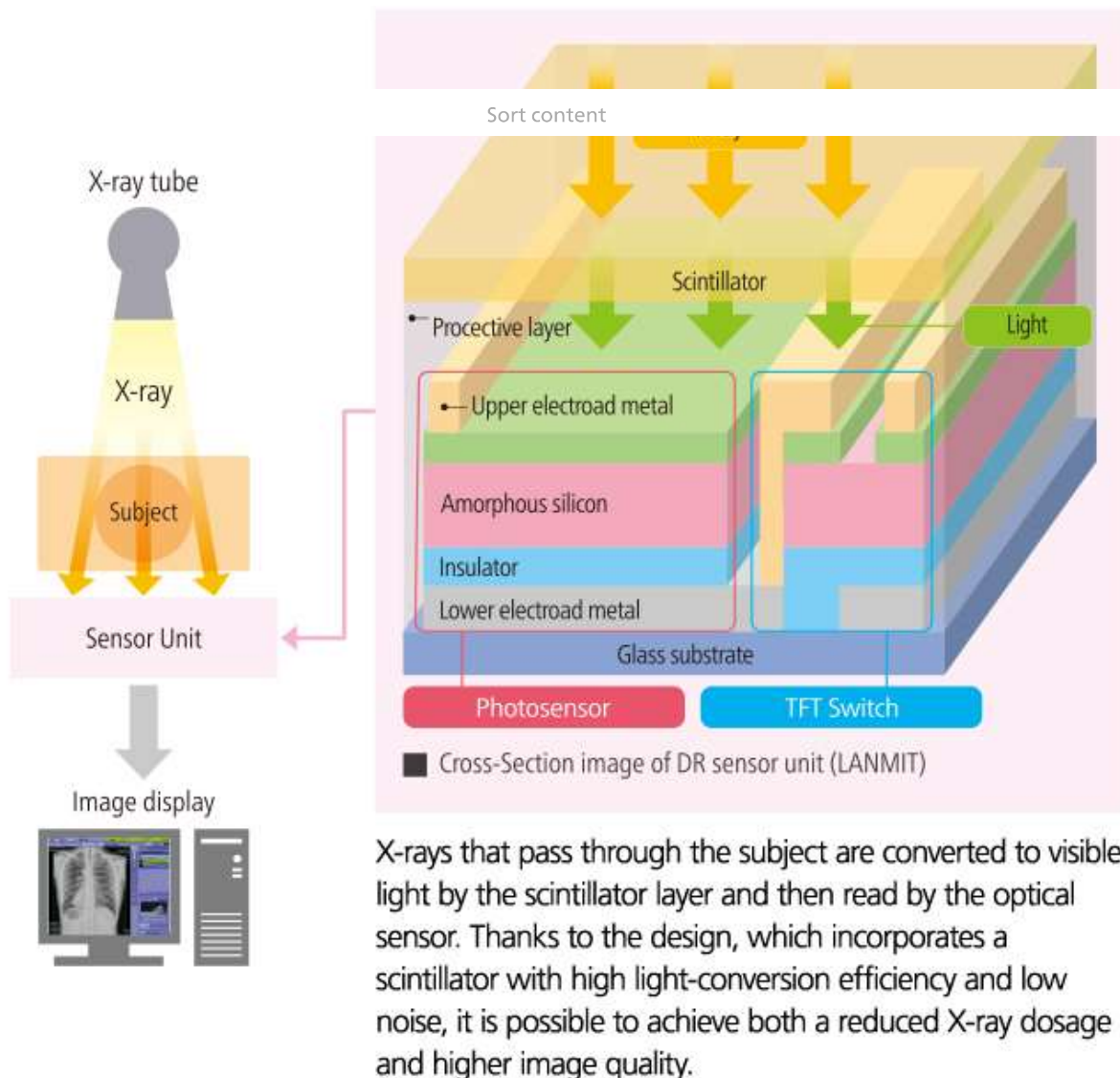


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Standing chest X-ray in a general radiography room

X-rays that pass through the human body are converted to visible light by the scintillator layer and then directly read by the photosensor. Reading X-ray images are displayed on the monitor in just 1 to 2 seconds. What's more, reading images can be shared within medical facilities via internal networks or transferred to external institutions, making the system useful in the telemedicine and emergency treatment fields.



How DR Works

Noise reduction was a significant challenge during development, but Canon resolved this issue by developing in-house such dedicated components as integrated circuits (IC), signal processing circuits and power supplies. The result was a low-noise sensor with a large imaging screen—a key component of Canon's static-image digital radiography systems.

Wireless Digital Radiography Systems

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Canon revamped its wireless CXDI series of wireless digital radiography systems, the mainstays of the CXDI series, in 2017. This included the addition of three new, differently sized products offering superb portability and operability: the CXDI-410C Wireless, CXDI-710C Wireless and CXDI-810C Wireless. In addition to wireless functionality, the CXDI-Wireless series realizes lighter weight for easier carrying and improved usability. These products can therefore be used not only in general X-ray rooms but also in such locations as patients' bedsides and operating rooms to make possible low-stress X-ray imaging for both radiological technologists and patients.

Weight has been reduced through the use of carbon materials for the product exterior, resulting in an industry-leading* light weight of approximately 2.3 kg. The products also feature an easy-to-carry design to reduce burden on users during operation. What's more, when operating in environments with poor signal reception, captured images can be saved to the devices' internal memory and sent after the connection is restored.

The devices employ flat-panel X-ray sensors that realize a high resolution of 125 μm † while maintaining high sensitivity. By combining these sensors with high-brightness cesium iodide scintillators, the devices make possible reduced X-ray dosage and patient burden and deliver high-quality images suitable for diagnostics.

* resulting in an industry-leading

Among small-cassette-size wireless digital radiography devices. Includes weight of battery pack (as of September 6th, 2018 (based on Canon research)).

† 125 μm

1 μm (micrometer): one millionth of a meter

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The CXDI-Wireless series offers superlative portability and operability

Control Software

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The CXDI series uses specially developed control software to perform such operations as imaging control, image processing and export of captured images. Through the use of this software, which includes image processing functions to reduce noise, increase contrast and adjust dynamic range[‡], the devices deliver images more suitable for diagnosis. In addition, the software can be linked to hospital information systems and other networks. This enables technicians to share captured images and patient information within a hospital, facilitating smoother operations in clinical settings.

‡ Dynamic range
the contrast range between the darkest shadows and the brightest highlights of an image

Fluoroscopy

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Canon also develops X-ray detectors for X-ray fluoroscopy, a procedure used to observe through video such parts of the human body as the stomach and intestines. The procedure also enables technicians to capture static images of areas of interest at any time. Among the growing range of applications for this technique are stomach examinations and the confirmation of joint function in orthopedic surgery. Canon has applied its high-image-quality technology and technology cultivated through development of X-ray static image sensors to make possible fluoroscopy that is suitable for diagnostic use while requiring a lower X-ray dosage.

Canon's CXDI products that employ fluoroscopy technology enable both the capture of fluoroscopic videos and high-resolution static images using a single device. In addition, Canon offers portable models that can be easily carried around. Each of these products can be used for versatile and efficient operations: for example, in the morning, X-ray imaging of a patient's digestive organs can be performed while the patient is resting on a table after taking barium, and in the afternoon, the same system can be used to perform X-ray imaging of the patient's chest while standing.


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